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(54) Title: INTEGRATED HEATING AND COOLING DEVICE IN A REACTOR FOR THERMAL TREATMENT OF A SUBSTRATE

(54) Titre: DISPOSITIF DE CHAUFFAGE ET DE REFROIDISSEMENT INTEGRE DANS UN REACTEUR DE TRAITEMENT THERMIQUE D'UN SUBSTRAT

(57) Abstract

A heating and cooling device for a substrate (14), comprising an electric heating resistor (16) which is integrated into notches (18) in the plate (12) with an inner covering (22) exhibiting good thermal conductivity placed therebetween. A cooling box (26) is arranged opposite the plate (12) and can be displaced between a first position that is spaced by means of a gap (32) in the lower surface of the plate (12) during the heating phase when the resistor (16) is supplied with power and a second near position when it comes into contact with the lower surface during cooling of the plate (12). The cooling box (26) is provided with a superficial sheet (30) of compressible material exhibiting good thermal conductivity to ensure homogeneous thermal contact with the lower surface of the plate (12). The notches (18) of the plate (12) are separated from each other by intermediate transverse members (20) that are used as calorific transfer means when the cooling box (26) is in the second near position. The invention can be used in thermal treatments of substrates or samples.

